

What is claimed is:

- 5 1. An apparatus for providing at least one additive for incorporation in an asphalt, said apparatus comprising:
- a receptacle constructed and arranged to receive one or more of said additives;
 - a scale adapted to measure respective gravimetric amounts of said one or more additives that are received by the receptacle;
 - 10 a mixer adapted to mix said one or more additives in said receptacle into a blend; and
 - a transport system that delivers said blend from said receptacle for delivery to an asphalt mixing box.
- 15 2. An apparatus according to claim 1, comprising one or more inlets for said additives that communicate with said receptacle, each of said one or more inlets being respectively compatible with an outlet from a centreless auger to receive said additives.
- 20 3. An apparatus according to claim 1, wherein said scale is adapted to measure gravimetric amounts of materials in said receptacle and comprises one or more load cells tared to account for the weight of said receptacle when empty.
- 25 4. An apparatus according to claim 1, wherein said mixer comprises a vertical auger centrally located in said receptacle.
5. An apparatus according to claim 1, wherein the transport system comprises a motor-driven rotary valve.

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6. An apparatus according to claim 1, wherein said mixer is adapted to blend pelletised additives.

7. An apparatus according to claim 1, further comprising:

5 a transfer pipe connected between said receptacle and an input of an asphalt mixing box; and

a pneumatic pressure source connected to said transfer pipe.

8. An apparatus for preparing a blend of additives for incorporation in an asphalt, said apparatus comprising:

10 a receptacle, having an inlet, for sequentially receiving one or more of said additives;

weighing means connected to said receptacle for measuring respective gravimetric amounts of said additives;

15 mixing means for mixing said additives in said receptacle into a blend;

transfer means for directing said blend of additives from said receptacle to means for delivering said blend to an asphalt mixing box; and

a control system having an input from said weighing means and control outputs to said inlet of said receptacle and to said mixing means and said transfer means, said control system being programmable to regulate receipt of said additives through said receptacle inlet based on gravimetric amounts of additives measured by said weighing means until a desired total amount of said additives in desired proportions thereof is achieved, and to operate said mixing means and said transfer means sequentially thereafter.

25 9. An apparatus according to claim 8, comprising one or more inlets for said additives, each of said inlets being respectively compatible with an outlet from a centreless auger.

10. An apparatus according to claim 8, wherein said weighing means comprises one or more load cells tared to account for a weight of said receptacle when empty.
11. An apparatus according to claim 8, wherein said mixing means comprises a vertical auger centrally located in said receptacle.
12. An apparatus according to claim 8, wherein the transfer means comprises a motor-driven rotary valve.
13. An apparatus according to claim 8, adapted to blend pelletised additives.
14. A method of blending additives for incorporation in an asphalt, said method comprising the steps of:
 feeding one or more of said additives into a receptacle;
 weighing each additive to achieve a desired proportion thereof in a desired total amount of said additives;
 mixing said additives in said receptacle into a blend; and
 transferring said blend from said receptacle for delivery to an asphalt mixing box.
15. A method according to claim 14, further comprising controlling said feeding of said additives based on an output of said weighing operation.
16. A method according to claim 14, wherein said feeding step comprises feeding said additives into said receptacle in pelletised form.
17. An apparatus for delivering additives for incorporation in an asphalt to an asphalt mixing box, said apparatus comprising:

a receptacle constructed and arranged to receive said additives, said receptacle having an input for said additives locatable at a level substantially lower than an input for said asphalt mixing box;

a mixer adapted to mix said additives and prepare a blend;

5 a transfer pipe between an output of said receptacle and an input of said asphalt mixing box; and

a pneumatic pressure source connected to said transfer pipe that conveys said blend along said transfer pipe from near the output of said receptacle to the input of said asphalt mixing box.

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18. An apparatus according to claim 17, wherein said transfer pipe includes a vertical portion thereof.

15 19. An apparatus according to claim 17, further comprising a valve that regulates pressure developed by said pneumatic pressure source.

20 20. An apparatus according to claim 17, further comprising means for diverting pressure developed by said pneumatic pressure source from said transfer pipe to an exhaust.

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21. An apparatus according to claim 17, adapted to deliver pelletised additives to said asphalt mixing box.

22. An apparatus according to claim 17, further comprising:
25 weighing means connected to said receptacle for measuring respective gravimetric amounts of said additives; and

transfer means for directing said blend of additives from said receptacle to said transfer pipe.

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23. An apparatus according to claim 22, adapted to deliver pelletised additives to said asphalt mixing box.

24. An apparatus according to claim 22 further comprising;

5 a control system having an input from said weighing means and control outputs to an inlet of said receptacle and to said mixer and said transfer means, said control system being programmable to regulate receipt of said additives through said receptacle inlet based on gravimetric amounts of additives measured by said weighing means until a desired total amount of said additives in desired proportions
10 thereof is achieved, and to operate said mixing means and said transfer means sequentially thereafter.

25. An apparatus according to claim 24, further comprising; means for diverting pressure from said transfer pipe to an exhaust, and wherein said control system has a
15 control output to said pressure diverting means and is programmable to operate said pressure diverting means in coordination with said transfer means.

26. An apparatus according to claim 25, adapted to deliver pelletised additives to said asphalt mixing box.

27. A method of delivering additives for incorporation in an asphalt to an asphalt mixing box, said method comprising the steps of:

supplying said additives to a receptacle for preparing a blend of said additives at a level substantially lower than an input for said additives to said asphalt mixing
25 box; and

pneumatically conveying a blend of additives output of said receptacle to the input of said asphalt mixing box.

28. A method according to claim 27, wherein said pneumatic conveying step
30 includes pneumatically conveying said blend of additives vertically.

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29. A method according to claim 27, wherein said pneumatic conveying step further comprises regulating a rate said blend is conveyed to said input of said asphalt mixing box.

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30. A method according to claim 27, wherein said supplying step comprises supplying said additives in pelletised form.

31. A method according to claim 27, further comprising.

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weighing each additive to achieve a desired proportion thereof in a desired total amount of said additives;

mixing said additives in said receptacle into a blend; and

transferring said blend from said receptacle for delivery to an asphalt mixing box.

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32. A method according to claim 31, wherein said supplying step comprises supplying said additives in pelletised form.

33. A method according to claim 31, further comprising;

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controlling said supplying of said additives based on an output of said weighing operation.

34. A method according to claim 33, wherein said supplying step comprises supplying said additives in pelletised form.